

Attorney Docket No. 000315

09/910,361

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for transmitting a GPS receiver code-phase search range to a integrated GPS/wireless terminal unit operating in a wireless network, said system comprising:

a receiver operable to generate a GPS time reference;

a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location, the wireless coverage area, an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit, said GPS time reference and the estimated wireless signal propagation delay within said coverage area, and

a transmitter coupled to said controller and operable to transmit said calculated GPS code search range.

2. (Original) The invention of Claim 1 wherein said GPS code-phase search range is defined by a center value and a size value.

3. (Currently Amended) A system for transmitting a GPS receiver code-phase search range to a integrated GPS/wireless terminal unit operating in a wireless network, comprising:

a GPS receiver operable to generate a GPS time reference;

means for obtaining a time offset for the GPS/wireless terminal unit relative to said GPS time reference;

a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location, a radius of the wireless coverage area served by the base station, an elevation angle of a GPS satellite, and said time reference; and

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a transmitter coupled to said controller and operable to transmit said calculated GPS code search range.

4. (Original) The invention of Claim 3 wherein said GPS code-phase search range is defined by a center value and a size value.

5. (Original) The invention of Claim 3 wherein said means for obtaining a time offset utilizes the round-trip wireless signal propagation time between said base station and the terminal unit to establish said time offset.

6. (Currently Amended) A system for transmitting a GPS receiver code-phase search range to a integrated GPS/wireless terminal unit operating in a wireless network, comprising:

a GPS receiver operable to generate a GPS time reference;

means for obtaining a time offset for the GPS/wireless terminal unit relative to said GPS time reference;

means for obtaining a location reference for the GPS/wireless terminal unit;

a controller operable to calculate a GPS code-phase search range with reference to a variance of a positioning error of said location reference, and said time reference; and

a transmitter coupled to said controller and operable to transmit said calculated GPS code search range.

7. (Original) The invention of Claim 6 wherein said GPS code-phase search range is defined by a center value and a size value.

8. (Original) The invention of Claim 6 wherein said means for obtaining a location reference utilizes means for providing terrestrial based trilateration to establish said location reference.

9. (Currently Amended) A method for defining a GPS receiver code-phase search range for an integrated GPS/wireless terminal unit operating in a wireless network having a base station comprising the steps of:

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calculating a GPS code-phase search range with reference to the base station geographic location plus the wireless coverage area, an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit, and with reference to a base station GPS time reference plus the estimated wireless signal propagation delay within said coverage area and transmitting said calculated GPS code-phase search range.

10. (Original) The invention of Claim 9 wherein said GPS code-phase search range is defined by a center value and a size value.

11. (Currently Amended) A method for defining a GPS receiver code-phase search range for an integrated GPS/wireless terminal unit operating in a wireless network having a base station, comprising the steps of:

obtaining a time reference for the GPS/wireless terminal unit establishing the time offset relative to the base station GPS time;

calculating a GPS code-phase search range with reference to the base station geographic location plus a radius of the wireless coverage area served by the base station, an elevation angle of a GPS satellite, and said time reference; and

transmitting said calculated GPS code-phase search range.

12. (Original) The invention of Claim 11 wherein said GPS code-phase search range is defined by a center value and a size value.

13. (Original) The invention of Claim 11 wherein said obtaining step utilizes the round-trip wireless signal propagation time between said base station and the terminal unit to establish the time offset.

14. (Currently Amended) A method for defining a GPS receiver code-phase search range for an integrated GPS/wireless terminal unit operating in a wireless network having a base station, comprising the steps of:

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obtaining a time reference for the GPS/wireless terminal unit establishing the time offset relative to the base station GPS time;
obtaining a location reference for the GPS/wireless terminal unit;
calculating a GPS code-phase search range with reference to a variance of a positioning error of said location reference, and said time reference; and
transmitting said calculated GPS code-phase search range by the base station.

15. (Original) The invention of Claim 14 wherein said GPS code-phase search range is defined by a center value and a size value.

16. (Original) The invention of Claim 14 wherein said obtaining a location reference step utilizes terrestrial based trilateration techniques to establish said location reference.

17. (Previously Presented) A system for transmitting a GPS receiver code-phase search range to an integrated GPS/wireless terminal unit operating in a wireless network, said system comprising:

a receiver operable to generate a GPS time reference;
a controller operable to calculate the GPS code-phase search range independent of a timing offset of the integrated GPS/wireless terminal unit, the GPS code-phase search range calculated with reference to a base station geographic location, a wireless coverage area, and said GPS time reference; and
a transmitter coupled to said controller and operable to transmit said calculated GPS code-phase search range.

18. (Previously Presented) The system of claim 17, wherein the controller is further configured to calculate the GPS code-phase search range with reference to a GPS satellite elevation angle relative to a plane centered at the base station.

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19. (Previously Presented) A system for transmitting a GPS receiver code-phase search range to an integrated GPS/wireless terminal unit operating in a wireless network, said system comprising:

a receiver operable to generate a GPS time reference;

a controller operable to calculate the GPS code-phase search range with reference to a base station geographic location, a position estimate of the integrated GPS/wireless terminal unit having an uncertainty area distinct from the base station geographic location, and said GPS time reference; and

a transmitter coupled to said controller and operable to transmit said calculated GPS code-phase search range.